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IIT Delhi to award 178 PhD degrees

TIMES NEWS NETWORK

New Delhi: Delhi IIT will hold its 45th convocation on November 1, at which 178 PhD, 935 postgraduate and 729 graduate degrees will be awarded. Physicist and Nobel Prize winner George F Smoot will deliver the convocation address.

IIT Delhi director R K Shevgaonkar said that MHRD has asked the institute to coordinate for the Unnat Bharat Abhiyan. IIT-Delhi will collaborate with the other IITs, NITs, other technical institutions and NGOs for rural development. "Each IIT will adopt 10 villages in the neighbourhood and suggest financially viable technological solutions to problems of sanitation, water, energy and housing," he said. IIT-Delhi has already helped set up micro-enterprises in a village in Jodhpur.

While the number of PhDs being awarded over the last three years has declined marginally, IIT authorities promise that the number will be more than double in two years.

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आईआईटी दिल्ली का 45वां दीक्षांत समारोह कल

नईदुनिया ब्यूरो, नई दिल्ली। आईआईटी, दिल्ली का 45वां दीक्षांत समारोह आगामी 1 नवंबर को आयोजित होगा। समारोह में देश के भावी इंजीनियरों को डिग्रियां प्रदान की जाएंगी।

आईआईटी दिल्ली के ओपन एयर थियेटर में आयोजित होने वाले कार्यक्रम में तीन पूर्व छात्रों को एल्युमिनी अवॉर्ड से भी सम्मानित किया जाएगा। इनमें उत्तराखंड सेवा निधि पर्यावरण शिक्षा संस्थान (उत्तराखंड) के निदेशक ललित पांडे, डीआरडीओ के डायरेक्टर जनरल डॉ. अविनाश चंद्र और जिरोक्स रिसर्च सेंटर इंडिया के निदेशक व जिरोक्स कॉरपोरेशन बंगलुरु के उपाध्यक्ष मनीष गुप्ता के नाम शामिल हैं। दीक्षांत समारोह में मुख्य अतिथि के तौर पर इस बार नोबल पुरस्कार विजेता प्रो. जार्ज स्मूट उपस्थिति रहेंगे। आईआईटी दिल्ली की ओर से इस बार दीक्षांत समारोह में कुल 1842 डिग्रियां प्रदान की जाएंगी, जबकि बीते साल ये संख्या 1813 थी। इस बार 178 विद्यार्थियों को पीएचडी, 935 को पोस्ट ग्रेजुएशन और 729 को ग्रेजुएशन की डिग्री प्रदान की जाएगी।

रोजगार बढ़ाने और वैकल्पिक ऊर्जा स्रोतों पर काम होगा

आईआईटी दिल्ली के 10 गांवों का विकास करेगा

नई दिल्ली | प्रमुख संवाददाता

आईआईटी दिल्ली राजधानी के दस गांवों का विकास करेगा। देश के सभी आईआईटी संस्थान अपने क्षेत्र के 10 गांवों को गोद लेंगे। यहां रोजगार बढ़ाने, वैकल्पिक ऊर्जा स्रोतों पर काम और जल संग्रह आदि के लिए संस्थान अपनी तकनीक का इस्तेमाल करेंगे। केंद्र सरकार की भारत उन्नयन योजना के तहत ये संभव होगा।

बता दें कि आईआईटी दिल्ली में हाल ही में केंद्रीय मानव संसाधन विकास मंत्री स्मृति ईरानी ने उन्नत भारत कार्यक्रम पर तीन दिवसीय कार्यशाला की शुरुआत की थी। इसमें आईआईटी के वैज्ञानिकों समेत देशभर से ऐसे समाजसेवी और नौकरशाह आए थे, जिन्होंने गांव के विकास के लिए अपना मॉडल पेश किया था। अब इनमें से चुनिंदा मॉडल को गांवों में लागू किया जाएगा। बहरहाल, आईआईटी दिल्ली के निदेशक आरके शेवगोनकर ने बताया कि संस्थान अगले हफ्ते तक शहर के 10 गांवों की पहचान कर उस पर विकास कार्य शुरू कर देगा।

उन्होंने बताया कि नई तकनीक का इस्तेमाल संस्थान के वैज्ञानिक, शिक्षक एवं छात्र भी करेंगे। इसमें केंद्र सरकार फंड के लिए सहयोगी करेगी। इस परियोजना से जुड़े आईआईटी के एक अधिकारी ने बताया कि गांवों का चुनाव वहां की आबादी, शिक्षा की स्थिति और रोजगार आदि पैमानों के आधार पर होगा। यहां मूलभूत सुविधाओं और संरचना के लिए काम किया जाएगा।

इन पांच क्षेत्रों में काम होगा

- जैविक उत्पाद की उपलब्धता
- वर्षा जल संग्रह से पेयजल की समस्या दूर करना
- सिंचाई के पानी की व्यवस्था करना, गंदे पानी के निकास की व्यवस्था
- बायो गैस, सौर ऊर्जा, उन्नत चूल्हे, माइक्रोहैडल पर जोर होगा
- रोजगार के लिए विभिन्न उत्पाद की आधुनिक प्रोडक्शन यूनिट खुलेंगी

शाकाहारी-मांसाहारी खाने पर सुझाव मांगा

मानव संसाधन विकास मंत्रालय ने हाल में सभी शैक्षणिक संस्थानों को शाकाहारी और मांसाहारी खाना अलग परोसने की व्यवस्था सुनिश्चित करने के लिए सुझाव मांगा। आईआईटी दिल्ली से भी कैंटीन और मेस की वर्तमान स्थिति जानने व सुझाव के लिए पत्र भेजा गया। निदेशक आरके शेवगोनकर ने बताया कि उनके यहां 13 हॉस्टल हैं। सभी की अपनी मेस हैं। सुझाव मांगा गया है हम इस मामले को देख रहे हैं। प्रो. एसके गुप्ता ने बताया कि बीते साल शाकाहारी और मांसाहारी छात्रों की मांग पर मेस में मांसाहारी खाना उपलब्ध कराना बंद कर दिया गया था। मांसाहारी खाने वाले छात्र भी गुणवत्ता को लेकर संतुष्ट नहीं थे। इस वजह से खाने पर रोक लगाई गई थी। हालांकि, कैंटीन में मांसाहारी खाना उपलब्ध है।

दो नए हॉस्टल खुलेंगे : आईआईटी दिल्ली में दो नए हॉस्टल खुलेंगे। छात्र और छात्राओं के लिए अलग-अलग हॉस्टल बनाए जाने की योजना पर काम किया जा रहा है। लड़कों के लिए एक हजार छात्रों की क्षमता वाला हॉस्टल बनेगा। लड़कियों के लिए 414 सीट वाला नया हॉस्टल बनाया जाएगा।

छात्रों के लिए एक्टिविटी सेंटर तैयार किया जाएगा। इसके अलावा जीएच केशवानी रिसर्च सेंटर की शुरुआत भी की जाएगी।

कल दीक्षांत समारोह, 1842 छात्रों को मिलेंगी डिग्री : आईआईटी दिल्ली में शनिवार को दीक्षांत समारोह आयोजित किया जाएगा। खास बात यह है कि

2006 में फिजिक्स के क्षेत्र में नोबल पुरस्कार से सम्मानित प्रो. जार्ज एफ स्मूट छात्रों को संबोधित करेंगे। इस मौके पर कुल 1842 छात्रों को डिग्री दी जाएगी। इनमें पीएचडी के 178, स्नातकोत्तर 935, स्नातक के 729 छात्र शामिल हैं। बता दें कि इस साल संस्थान में पीएचडी और स्नातकोत्तर के छात्रों की संख्या में कमी आई है।

2013 में 188 छात्रों ने पीएचडी पूरी की थी। इस बार पीएचडी पूरी करने वालों की संख्या 178 पर सिमट गई है। इसके अलावा 2013 के दीक्षांत समारोह में स्नातकोत्तर के 988 छात्रों को डिग्री मिली थी। इस बार यह आंकड़ा 935 पर सिमट गया है।

IIT बनाएगा गांवों को हाईटेक

दिल्ली के आसपास के 10 गांवों को गोद लेकर करेगा ओवरऑल डिवेलपमेंट

■ नगर संवाददाता, नई दिल्ली

आईआईटी दिल्ली 10 गांवों को गोद लेगा और इन गांवों को टेक्नॉलजी से लैस करके वहां ओवरऑल डिवेलपमेंट का जिम्मा उठाएगा। मानव संसाधन विकास मंत्रालय के 'उन्नत भारत अभियान' को आगे बढ़ाते हुए दिल्ली और उसके आसपास के इलाकों में 10 गांवों को खोजा जाएगा। वहां किस तरह से विकास किया जाए और लोगों को किस तरह से रोजगार दिलाया जाए, यह रिसर्च के बाद डिजाइन किया जाएगा।

इस अभियान को शुरू करने से पहले आईआईटी दिल्ली ने जोधपुर के मातुंगा गांव में माइक्रो एंटरप्राइज प्रोग्राम को शुरू किया था। इनमें लोगों



को वहां की जरूरत के अनुसार छोटी इंडस्ट्री इस्टेब्लिश करने में हेल्प की गई। आईआईटी दिल्ली के डायरेक्टर आर. के. शेवगांवकर ने बताया है कि हम आने वाले हफ्ते में दिल्ली और आसपास के 10 गांवों की पहचान कर

IIT दिल्ली हफ्ते भर में 10 गांवों की पहचान करेगा

नोबल प्राइज विनर होंगे चीफ गेस्ट

1 नवंबर को होने वाले आईआईटी दिल्ली के 45वें कन्वोकेशन में कुल 1842 स्टूडेंट्स को डिग्री दी जाएगी। जहां पर पीएचडी के 178, पोस्ट ग्रेजुएशन के 935 और अंडर ग्रेजुएट प्रोग्राम के 729 स्टूडेंट्स को डिग्री दी जाएगी। वहीं कन्वोकेशन के इस मौके पर फिजिक्स में नोबल प्राइज विनर प्रोफेसर जॉर्ज. एफ. स्मूट चीफ गेस्ट के तौर पर स्टूडेंट को संबोधित करेंगे। यह जानकारी देते हुए डायरेक्टर शेवगांवकर ने इंस्टीट्यूट की ग्लोबल रैंकिंग पर इंटरनेशनल संस्थानों की तैयार की गई रैंकिंग पर पूछे गए सवाल पर कहा कि सिर्फ देश के ही संस्थानों की रैंकिंग सिस्टम की व्यवस्था की जाए, जिससे इन संस्थानों की एक्चुएल स्ट्रेंथ के बारे में पता चल सके।

लेंगे। इसकी फंडिंग में मानव संसाधन और विकास मंत्रालय के साथ अन्य मंत्रालयों का भी सहयोग रहेगा। इंस्टीट्यूट के डिप्टी डायरेक्टर एस. एन. सिंह बताते हैं कि गांव की

पहचान कर वहां पर उपयोग किए जा रहे नैचुरल रिसोर्सेस को भी नोटिफाई किया जाएगा और उसके बाद उसी के आधार पर वहां पर डिवेलपमेंट की प्लानिंग तैयार की जाएगी।

हर आईआईटी गोद लेगा 10 गांव

नई दिल्ली। देश के ग्रामीण क्षेत्र को विकसित करने के उद्देश्य के मद्देनजर प्रत्येक आईआईटी कम से कम 10 गांवों की पहचान कर उसे गोद लेगा। आईआईटी तकनीक की मदद से इन गांवों में विकास के काम किए जाएंगे। यह मिशन उन्नत भारत अभियान कार्यक्रम के तहत शुरू किया गया है। आईआईटी दिल्ली को गतिविधियों के समन्वय के लिए नियुक्त किया गया है।

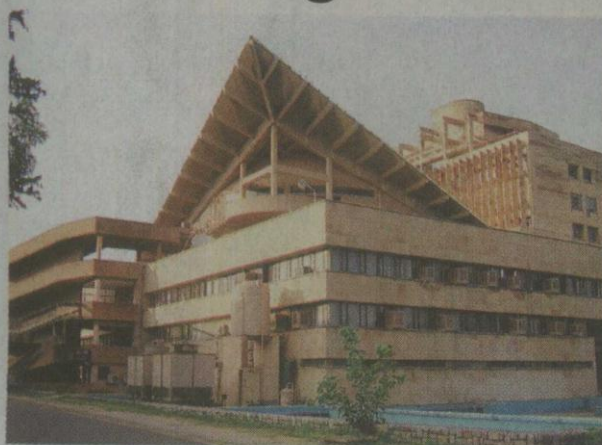
आईआईटी, दिल्ली के निदेशक के शेवगांवकर ने कहा कि इस प्रयास के तहत प्रत्येक आईआईटी 10 गांवों को गोद लेगा। इससे पहले सितंबर में आईआईटी, दिल्ली ने योजना का खाका तैयार करने के लिए एक वर्कशॉप का आयोजन किया था। एजेंसी

HRD wants IIT-D to get out of veg, non-veg mess

IKNOOR KAUR ■ NEW DELHI

After creating quite a buzz among the country's Indian Institutes of Technology (IITs) over serving vegetarian and non-vegetarian food in the same mess, the IIT-Delhi reportedly received a letter from the Ministry of Human Resource Development (HRD) asking them whether they have an existing arrangement for making separate messes for the two and if not then would it be possible for them to do so.

While IIT-D Director RK Shevgaonkar said that they would separate non-vegetarians from vegetarians if asked to by the HRD Ministry, he also added that if done so it would lead to a lot of inconvenience for students. "However, no decision on the matter has yet been taken and we are exploring our avenues," he said while addressing the media at IIT-D's annual Press conference before their convocation.



The issue came up after a man with no relation to the IITs put a petition saying that serving non-vegetarian and vegetarian food together in canteens and messes is against the Indian culture. Though the UPA Government quashed this

request of the man on the pretext that IITs were not centres where religious ideologies manifested in such a way. Nonetheless, HRD Minister Smriti Irani has been quick in taking cognizance of the letter and has also sent a notice.

Shevgaonkar elaborated, "In case we get orders to make this change, we will. But in that case since a new building cannot be set up for only this purpose, we will have to make hostel messes solely vegetarian or solely non-vegetarian. Then students will have to go from one hostel to another for eating instead of eating in their own hostel messes."

Meanwhile, the convocation day of IIT-Delhi will be on November 1. This year 178 students of a total enrollment of 1,974 would be getting their PhDs while 935 students out of 2,265 will get post graduate degrees and 729 of 3,801 currently enrolled students will get their undergraduate degrees.

According to SK Gupta, dean students' affairs, IIT-Delhi is now going to focus on increasing PhDs. "Hopefully in two years we will have double the number of students collecting their PhDs because we are focusing on making

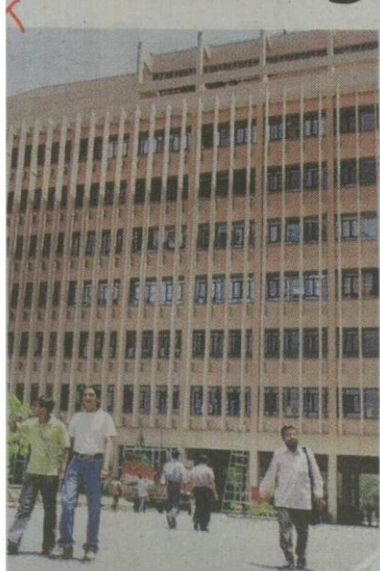
research work more mainstream," he said, adding, "We want to define research in a way that aligns with the progress of the country. We need better and enhanced infrastructure for that and we are working on it."

IIT-Delhi had also a few months back held workshops for their new Unnat Bharat Abhiyan, which is meant for the upliftment of rural India. Shevgaonkar said, "As per this initiative each IIT will get 10 villages to take care of. They will basically gauge the problems of the village and then find viable solutions for them. Then they will make a model and give to the Government which will then work with other sectors to help the villages."

Some of the main issues that these students will look into will be sanitation, water - drinking water and water storage, power, housing and transport. The HRD Ministry will officially launch this scheme in the coming month.

Mail Today ND 31-Oct-14 p-22

IIT-Delhi goes vegan before HRD proposal



IIT-Delhi officials say decision taken after students complained of poor quality meat products.

By Heena Kausar
in New Delhi

THE IIT-Delhi had gone full vegetarian five months ago even before the controversial letter from the HRD ministry appeared in the mailbox of all the Indian Institutes of Technology (IITs) and Indian Institutes of Managements (IIMs), seeking their opinion on a proposal for having separate dining areas for non-vegetarians.

Officials maintain that the decision to go vegan was taken after even non-vegetarian students said the meat products being served in hostel mess was unhygienic. However, students claimed that one of the prime reasons to take the decision was that many vegetarian students had expressed their displeasure at eating on the same table with non-vegetarians.

"All the mess secretaries held discussions with students and

after receiving their views we decided to tell the director that students don't want non-vegetarian food. It was due to high price, bad quality and also because many students said they don't want to eat with non-vegetarian people," said Jay Prakash Nagar, former mess secretary, Aravali Hostel.

The HRD ministry recently sent a letter to IITs and IIMs along

Ministry letter to IITs & IIMs on separate dining areas

with some representations that the ministry had received demanding a separate eating space and mess for students eating vegetarian food. One of the representation, which was also marked to Prime Minister Narendra Modi, reads, "Students are deviating from the Indian value system because food has

direct correlation with their thoughts. It is the call of the parents of India that IITs and other institutions segregate their dining halls for vegetarians."

The privately-run canteens in the IIT-D campus still serve non-vegetarian food items.

"All decisions regarding what will be served in mess are taken by students. They conveyed to us that they don't want non-vegetarian food because it wasn't hygienic and was costly, so we stopped it. But we have decided to hire a vendor who will supply non-vegetarian food twice a week," said Sharad Kumar Gupta, dean, students' affair IIT-D.

"It wasn't students but administration which forced this on us. So what if a few students did not want to share the table with non-vegetarians, many others want non-vegetarian food back," said Abhishek Baidya, mess secretary of one of the hostels.

भावनाओं की कड़वाहट हॉस्टलों में बंद हो गया मांसाहारी खाना पकाना, विद्यार्थियों की मांग पर बाहर से मंगाया जा रहा है मांसाहार

शाकाहार फ्रेंडली हुई आईआईटी दिल्ली

नईदुनिया ब्यूरो, नई दिल्ली

आईआईटी, आईआईएम व मेडिकल शिक्षण संस्थानों के छात्रवासों में परोसे जाने वाले शाकाहारी व मांसाहारी खाने को अलग-अलग बनाने व परोसने के विषय में मानव संसाधन विकास मंत्रालय की ओर से आए पत्र को लेकर आईआईटी दिल्ली ने साफ किया है कि उनका कैम्पस पूरी तरह से शाकाहार फ्रेंडली है। कैम्पस में शाकाहारी विद्यार्थियों की भावनाओं को ठेस न पहुंचे इसके लिए मंत्रालय का पत्र आने से पहले ही करीब पांच माह पूर्व यहां हॉस्टल मैस में मांसाहारी खाना पकाने की व्यवस्था बंद है। मांसाहारी विद्यार्थियों के लिए संस्थान बाहर से ऑन डिमांड खाना मंगा रहा है।

आईआईटी दिल्ली के डीन ऑफ स्टूडेंट्स अफेयर्स प्रो. शरद कुमार गुप्ता ने बताया कि मंत्रालय का पत्र उन्हें हाल ही में प्राप्त हुआ है, जबकि हमारे यहां शाकाहारी विद्यार्थियों की भावनाओं को ध्यान में रखते हुए पहले ही सभी 13

शाकाहारी विद्यार्थियों की भावनाओं को ठेस न पहुंचे इसके लिए पांच माह पहले ही बंद कर दिया गया मांसाहार पकाना



हॉस्टलों में मांसाहारी खाना पकाने की प्रक्रिया बंद कर दी गई है। करीब पांच माह पूर्व कुछ विद्यार्थियों ने जब शाकाहारी व मांसाहारी खाने को अलग-

इस मामले में मानव संसाधन विकास मंत्रालय की ओर से आए पत्र को लेकर संस्थान ने साफ की स्थिति

अलग बनाने की मांग की, तो मांसाहार पसंद करने वाले विद्यार्थियों ने स्वयं ही इस तरह के खाने को हॉस्टल मैस में तैयार न कराने का सुझाव दिया।

विद्यार्थियों की आपसी सहमति के बाद सभी हॉस्टल मैस में मांसाहारी खाना पकाने की व्यवस्था बंद कर दी गई थी।

प्रो. गुप्ता ने बताया कि हाल ही में मंत्रालय की ओर से उन्हें एक पत्र मिला, जिसमें मध्यप्रदेश के कटनी निवासी मनोज कुमार जैन व शंकरलाल जैन सहित राजस्थान के सूरत व यूपी के आगरा आदि से आए विभिन्न लोगों के पत्रों का हवाला देते हुए शाकाहारी खाना खाने वाले विद्यार्थियों के लिए अलग से व्यवस्था करने की बात की गई थी। इस पत्र में ये भी पूछा गया कि मौजूदा समय में आईआईटी दिल्ली मैस में शाकाहार व मांसाहार को किस तरह से विद्यार्थियों को उपलब्ध कराया जा रहा है। डीन ऑफ स्टूडेंट्स अफेयर्स ने बताया कि हमारे हॉस्टलों में शाकाहारी खाना ही परोसा जा रहा है और जिन छात्रों को मांसाहारी खाना चाहिए उन्हें प्राइवेट वेंडरों की मदद से एक दिन पूर्व मांग करने पर ऑन डिमांड खाना उपलब्ध कराया जा रहा है। इसी तरह हॉस्टल मैस से इतर कैम्पस में उपलब्ध दो बड़ी कैटीन भी मांसाहारी खाना उपलब्ध कराती हैं।

Rashtriya Sahara ND 31-Oct-14 P-4

‘आईआईटी है वेजिटेरियन फ्रेंडली’

नई दिल्ली (एसएनबी)। देशभर के आईआईटी, आईआईएम व मेडिकल शिक्षण संस्थानों के हॉस्टलों में परोसे जाने वाले शाकाहारी व मांसाहारी भोजन को अलग-अलग बनाने व परोसे जाने पर मानव संसाधन एवं विकास मंत्रालय के निर्देशों पर आईआईटी दिल्ली ने बृहस्पतिवार को यह साफ किया है कि उनके यहां मांसाहार परोसा नहीं जाता है। बृहस्पतिवार को कैम्पस में आयोजित संवाददाता सम्मेलन में आईआईटी के डीन ऑफ स्टूडेंट्स वेलफेयर प्रो. शरद कुमार गुप्ता ने कहा कि कैम्पस पूरी तरह से वेजिटेरियन फ्रेंडली है। कैम्पस में शाकाहारी विद्यार्थियों की भावनाएं आहत न हो इस कारण कैम्पस में लगभग पांच महीने पहले ही नॉन वेज पकाना बंद कर दिया गया था, लेकिन जो विद्यार्थी नॉन वेजिटेरियन हैं, उनके लिए संस्थान बाहर से खाना मुहैया करवाता है।

आईआईटी मेस में मांसाहारी खाना बंद

अमर उजाला ब्यूरो

नई दिल्ली। उच्च शिक्षण संस्थानों में मांसाहारी व शाकाहारी भोजन के लिए अलग व्यवस्था करने का मुद्दा अब भारतीय प्रौद्योगिकी संस्थान (आईआईटी) दिल्ली में भी उठने लगा है। हालांकि छात्रों की धार्मिक भावनाएं आहत न हो इसको लेकर आईआईटी दिल्ली पहले से सजग है। छात्रों की डिमांड पर बीते कुछ माह से आईआईटी दिल्ली के सभी 13 हॉस्टल की मेस में मांसाहारी खाना बंद किया गया है। मांसाहारी खाने की सप्लाई प्राइवेट वेंडर के जरिये की जा रही है।

मालूम हो कि मध्यप्रदेश कटनी निवासी शंकरलाल सतेंद्र कुमार जैन की ओर से मानव संसाधन विकास मंत्री को एक पत्र लिखा गया। इसमें उनसे आग्रह किया गया कि आईआईटी आदि संस्थानों में शाकाहारी छात्रों के लिए अलग से भोजनशाला की व्यवस्था की जाए। इसके बाद मानव संसाधन विकास मंत्रालय के उच्चतर शिक्षा विभाग की ओर से सभी आईआईटी निदेशकों को इस पत्र को भेजते हुए इस पर वह क्या कार्रवाई कर रहे हैं इससे अवगत कराने को कहा गया।

इस संबंध में आईआईटी के डीन (स्टूडेंट अफेयर्स) प्रो. शरद कुमार गुप्ता ने बताया कि इस पत्र के आने से पहले ही छात्रों की डिमांड पर सभी हॉस्टलों में मांसाहारी खाने की व्यवस्था नहीं है। यह



मानव संसाधन विकास मंत्रालय को शाकाहारी रसोई अलग करने को लेकर मिला पत्र

एमएचआरडी ने सभी आईआईटी को इस संबंध में की गई कार्रवाई से अवगत कराने को कहा

व्यवस्था पांच माह से बंद है। दरअसल, मांसाहारी भोजन करने वाले छात्रों को यह लगता था कि एक तो यह जेब पर मंहगा पड़ता है वहीं अस्वच्छ भी है। जिन छात्रों को नॉन वेज खाना होता है उनके लिए बीते तीन सप्ताह से प्राइवेट वेंडर के जरिये सप्लाई की जा रही है। इसके लिए उन्हें एक दिन पहले नॉन वेज खाने की इच्छा जाहिर करनी होती है। वहीं, आईआईटी में मौजूद दो कैटीन में भी नॉन वेज खाने की व्यवस्था है। इस तरह से उनके यहां किसी प्रकार की दिक्कत व परेशानी नहीं है।

गांवों की तरक्की में हाथ बंटाएगा संस्थान

नई दिल्ली। देशभर के आईआईटी व अन्य तकनीकी संस्थान भारत के गांवों की तरक्की में हाथ बंटाएंगे। यह न केवल ग्रामीणों की समस्याएं सुनेंगे बल्कि उन्हें तकनीकी सहयोग देकर विकास का मार्ग प्रशस्त करेंगे। स्वच्छता, एकता के बाद अब मोदी सरकार उन्नत भारत अभियान के जरिये तकनीक द्वारा गांवों की समस्याओं का निदान करने जा रही है। इस के लिए आईआईटी दिल्ली को नोडल एजेंसी बनाया गया है। सभी आईआईटी व तकनीकी संस्थान इसमें सहभागी होंगे। मानव संसाधन विकास मंत्रालय की ओर से नवंबर में इसकी घोषणा की जा सकती है। आईआईटी दिल्ली के निदेशक प्रो. आरके शिवगांवकर ने बताया कि उन्नत भारत अभियान के अंतर्गत सभी 16 आईआईटी व तकनीकी संस्थानों को तकनीक के जरिये गांवों को उन्नति की राह पर लेकर जाना है। इसके लिए आईआईटी दिल्ली में 7 से 9 सितंबर तक एक वर्कशाप आयोजित की जा चुकी है। अभियान के तहत हर आईआईटी को अपने नजदीक के 10 गांवों में जाकर काम करना है। इसमें फैकल्टी के साथ पीएचडी छात्रों की टीम गांवों का दौरा करेगी और वहां क्या समस्या है और तकनीक से समाधान कैसे किया जा सकता है, यह बताएंगे। इससे वह एक तकनीकी आइडिया बताएंगे। हर आईआईटी ने इसके लिए गांवों की पहचान कर ली है।

Separate vegan canteens at IITs, IIMs on cards?

Yogita Rao & Vinamrata
Borwankar | TNN

Mumbai: The Union human resource development (HRD) ministry has written to the premier IITs and IIMs seeking their opinion on setting up of separate canteens for vegetarians. The ministry has forwarded around five letters, written in chaste Hindi by a group that has sought such a bifurcation, to the institutes.

In IIT-Bombay, for instance, non-vegetarian food is already being cooked separately, though it is served in the same mess, said officials. An official added all the letters had demanded separate eating spaces for vegetarian students. Their contention was that a common eating area could make vegetarians uncomfortable.

Students at the Powai campus, though, denied any discomfort and called the demand "not very legitimate". A student associated with the hostel committee said, "There has never been any such complaint from any hostel. There was a demand from some hostels for a separate eating area in the same mess, and that was provided."

He added that messes and

Letter not a directive: IIT-D director

The director of Indian Institute of Technology, Delhi, said on Thursday that he was looking into the note on separate cooking facilities for vegetarian and non-vegetarian food in its canteens and clarified that the letter forwarded by the HRD ministry "isn't a directive". "We are yet to answer and will look into the issue," IIT-D director R K Shevgaonkar said. "We don't have any such policy," added IIT-D's dean, students' affairs, SK Gupta. Implementation of any such policy will also present some problems. Gupta pointed out that students have their meals in their own hostels – IIT-Delhi has 13 messes – but if this sort of segregation is imposed, students who want non-veg food may have to go to other hostels where it is being cooked. One student, requesting anonymity, said a few stalls on the campus have stopped serving non-vegetarian food but Gupta said it had nothing to do with the letter. "The stalls were bringing food from outside and there was greater chances of them being spoilt. That's why we stopped them," Gupta said. TNN

canteens are a different concept at IIT-B. While messes are primarily vegetarian, non-vegetarian food is served on students' demand twice or thrice a week. It is cooked and served separately, he said. "There has never been a demand for a separate block for vegetarians and non-vegetarians," he added. Canteens are eateries where students have to buy food, both vegetarian and non-vegetarian.

"We understand the need for separate counters for vegetarians and this has already been done. The demand for a totally separate canteen is unnecessary and

even staunch vegetarians have adjusted to the current setting," said a fourth-year student. U A Yajnik, dean, IIT-B students affairs, said his office has not received the letter. He, though, said food is cooked in a separate section in the same mess. "It is not feasible to have separate blocks, but the current system is working fine," said Yajnik. IIT-Bombay director Devang Khakhar said the mess was managed by students. An official from another IIT said the letter does not ask institutes to act on the request made by the group, but only that it be "considered".

No stand taken on segregation of mess in IITs: HRD Ministry

National Bureau

NEW DELHI: The Human Resource Development Ministry wrote to directors of all 16 Indian Institutes of Technology (IITs) on Thursday saying that no view had been taken on segregation of vegetarian and non-vegetarian mess.

The Hindu had reported that the Ministry had forwarded a letter from a Madhya Pradesh-based grain trader to the IITs on October 15. The letter from S.S.K. Jain of Katni, who described himself as a 'swayam-sevak' and BJP supporter, demanded the segregation of vegetarian mess as students are influenced by the "western culture through non-vegetarian food."

The Ministry's covering letter had asked the IITs to inform it of action they might

take in this regard. Non-vegetarian food has been stopped in IIT-Delhi this year and IIT-Madras has a separate vegetarian mess for the last couple of years.

In the letter on Thursday, Under Secretary A.K. Singh of Technical Section-I wrote, "... the representations were forwarded to the Institutes in routine manner, without any view having been taken thereon." (sic)

A Ministry source said, "Mr. Jain's letter along with those of others on the same issue was sent to the IITs as a routine matter. In RTI age, this is done routinely. Add to this, the pressure of Modi's MyGov portal inviting ideas. Further, no such direction can be given as this is an administrative matter to be decided by respective IITs which are autonomous."

'Letter asking to segregate non-veg food in IITs routine'

HT Correspondent

■ letters@hindustantimes.com

NEW DELHI: A fortnight after the HRD ministry sought a reply from the IITs on the action taken on the letter sent by an RSS-affiliated trader and a few others for segregating the vegetarian canteens from the non-vegetarian ones, it backtracked on Thursday saying it was a routine matter.

"The representations were forwarded to the institutes in routine manner, without any view having been taken thereon," a ministry official wrote to the IITs.

"I had sent similar letters during the Congress rule but got no reaction. I am happy that at least my plea has been looked into," Madhya Pradesh based grain



■ **HRD minister Smriti Irani**

trader SK Jain told HT.

IIT directors however said that the ministry had never given any directive to them to segregate their messes. "It was a formal note of the letter and there was no directive," RK Shevgaonkar, IIT Delhi director, told HT.

RSS LEADERS MEET IRANI
Top RSS leaders and a few of

its affiliates met HRD minister Smriti Irani on Thursday. "Controversial writer Dina Nath Batra of the Shiksha Bachao Andolan Samiti, who triggered a controversy with his book *Tejomay Bharat*, was expected to be part of the high level deliberation, but could not attend it since he was unwell.

"Providing affordable education and maintaining quality of education were the central theme of our deliberations," a source who attended the meeting told HT.

The ABVP had in July submitted a memorandum to Irani demanding a National Education Commission to keep higher education relevant. It had also demanded the education system should be based on Indian thoughts.

Sangh honchos want revamp in education system

Ramdev seeks new national school board

By **Mail Today Bureau** in New Delhi

SENIOR functionaries of the Rashtriya Swayamsevak Sangh (RSS) met Human Resource Development Minister Smriti Irani on Thursday to seek a sweeping revamp of India's education system.

The leaders of the RSS, the parent body of the ruling BJP, discussed the Indian education system with Irani and presented recommendations. Senior RSS leaders Suresh Soni and Dattatreya Hosabale attended the meeting with Irani.

Prime Minister Narendra Modi, BJP president Amit Shah and many other ministers and chief ministers in BJP-led states are former members of the RSS, which has denied being a participant in active politics. The RSS has been accused of pushing its Hindutva agenda and of making changes in history and other textbooks published by the central and state governments.

Recently, the RSS held its first meeting with senior central ministers for better coordination with the BJP-led government.

RSS affiliates like the Shiksha Bachao Andolan Samiti led by Dinanath Batra have called for

RSS affiliates have recently called for changes in the school curriculum

changes in the school curriculum to better reflect "Indian values". Modi's home state of Gujarat has already made Batra's books compulsory in schools, drawing criticism from academics and experts.

Yoga guru Ramdev, considered close to the RSS, has proposed a new national school board to "Indianise" the edu-



Senior leaders of the RSS met HRD Minister Smriti Irani on Thursday in New Delhi.

cation system and is reportedly hoping to get Modi's backing for the scheme. The proposed Bharatiya Board of Secondary Education aims to offer a blend of the traditional gurukul system with modern education.

Reasons behind poor rankings for Indian varsities discussed

1,842 students to get degrees at 45th convocation of IIT-D

Vijetha S.N

NEW DELHI: Unfair world university rankings, the need for an all-Indian national ranking system, and the enthusiasm for all the new Human Resource Development Ministry's schemes were the main topics of discussion at the Indian Institute of Technology, Delhi, on Thursday – where the administration had gathered to announce their 45th Convocation Day.

"This convocation will see 1,842 undergraduate, post-

graduate and PhD scholars get their degrees by Nobel Laureate George F. Smoot (2006 for Physics)," said Dean (Academics) Anurag Sharma, before saying that while they were number one or two in the existing national rankings, there was still significant progress to be made for better global rankings.

Global rankers often complain that one of the main reasons that Indian universities do not get proper rankings is because they fail to provide proper information or that it is difficult to access information about them. The IIT-D has made provisions to deal with this, but still only managed to be at number 235 in the QS world university rankings. "There are a lot of factors like international faculty and students that do not really work for an Indian institution. I had once been to an MBA institute in Europe, which was ranked really high. They had scored well on the international student factor, but all of them were from neighbouring countries and there were zero students from out of Europe. The distance between two countries there is like the distance between different States here

and it is actually like us saying that our students are international just because they are from different States," said IIT Director R.K Shevgaonkar, while explaining why the international rankings that had continuously ranked IIT-D very low, were wrong.

"Another factor for the rankings is the number of publications. We do a lot of research with the Defence sector where everything is kept confidential and of course cannot be published although it is very important. However, this is not taken into consideration," he said, adding that the MHRD's recent announcement that it would create an Indian ranking system should only be welcomed.

The director also spoke at length about their participation in the government's "Unnat Bharat workshop," where each IIT would be adopting 10 villages to help with technology. "We will work with villages to improve their way of life. For example if a village makes bamboo huts, we will try and find a way to make this easier. The aim of the scheme is to help them live easier and lead a better life."

DISCUSSING EDUCATION HRD minister, RSS leaders and representatives of six Sangh-affiliated organisations discuss the state of education in the country; attendees downplay the meeting

Irani Meets Sangh Leaders for 'Improving' Education

Our Political Bureau

New Delhi: Human Resource Development Minister Smriti Irani met RSS leaders and representatives of six Sangh-affiliated organisations on Thursday, amid speculation that the government was being persuaded to pursue a revamp of the education system.

The meeting that lasted well over three hours at Madhya Pradesh Sadan is part of the government-organisational interface being institutionalised by Prime Minister Narendra Modi. It was attended by RSS leaders Ram Madhav, Krishna Gopal, Suresh Soni and members of Vidya Bharti, Akhil Bhartiya Vidyaarthi Parishad, Rashtriya Saikshik Mahasangh, Bhartiya Shiksha Mandal, Sanskrit Bharti and Shiksha Bachao Andolan.

"This is the first of many meetings to come. The idea is to have better co-ordination with the government. We discussed the state of education in the country and gave our inputs on how the government could work towards improving education standards of the country," said one of attendees, who did not wish to be identified.

"There are many people who have



ZAHID

FOR INDIAN VALUES
Some RSS affiliates have suggested changes in the curriculum to better reflect Indian values

been working consistently in the field of education. We also wanted to suggest experts who could help the government in shaping its vision for education," the above attendee added.

Representatives of the six RSS affiliates have met Irani separately on different occasions, but this was probably the first time they had a meeting

together with the minister in presence of RSS leaders. The move set tongues wagging on saffronisation of education as some affiliates of the Sangh Parivar, such as Shiksha Bachao Andolan Samiti founder Dinanath Batra, have called for changes in the curriculum to better reflect 'Indian values'. Baba Ramdev too recently proposed setting up of a new education board in the country to 'Indianise' school education.

However, the meeting was downplayed by attendees. "It was an informal meeting and we did not have a specific agenda," said an attendee on why the meeting stretched over three hours. Irani was not available for comment.

HRD Sets Up Panel to Review IGNOU Functioning



New Delhi: The HRD ministry has set up a committee under Gujarat Uni-

versity Vice-Chancellor Syed Bari to review the functioning of IGNOU. The decision comes in wake of several complaints received against IGNOU VC and the parliamentary standing committee on HRD taking a grim view of how the varsity is being run. VCM Aslam has come under criticism for many of his decisions, including the scrapping of its community college scheme for the armed forces that left soldiers, airmen and sailors without certificates and diplomas.

President calls upon NITS to deepen involvement with society



<http://www.aninews.in/newsdetail2/story189409/president-calls-upon-nits-to-deepen-involvement-with-society.html>

New Delhi, Oct. 29 (ANI): President [Pranab Mukherjee](#) on Wednesday called upon all NITs to deepen and broad-base their involvement with society, saying their work must find resonance with the needs and aspirations of the people.

"On the model of the Saansad Adarsh Gram Yojana launched by the Prime Minister recently, NITs should adopt at least one village each and transform them into model villages worthy of replication across the country. They must source, if required, experts from other Central institutions to provide solutions to the wide mosaic of issues that such a transformation to model villages will entail," he said.

President Mukherjee, who inaugurated a two-day Conference of Directors of National Institutes of Technology (NITs) at the Rashtrapati Bhavan here, said the National Institutes of Technology (NITs) can and need to be the connecting force between rural innovations, local employment and world class manufacturing.

The President congratulated NITs for their contributions to research and innovation. He said given the right environment our scientists and technologists are second to none in the world. He stated that NITs have emerged as front runners in imparting quality scientific and technical education in India.

"The need now is for the NITs to undertake a synergetic collaboration with similar institutions in the country and abroad as also forge greater horizontal linkages with them at multiple levels of contact," he said while inaugurating a two day Conference of Directors of National Institutes of Technology (NITs) here at the Rashtrapati Bhavan.

"Economic growth and educational progress share a symbiotic relationship. Our engineers and scientists are vital to the process of national development. In today's context, urbanization, water supply, sanitation, environment protection, efficiency in delivery of healthcare and education call for innovative solutions," President added.

"Our engineers and scientists must be equipped to address new-age problems with new-age answers. Technical institutions like NITs should nurture world-class, professionally-competent engineers who will not only take India to new heights in technology but also improve the quality of life of our countrymen," he said.

The President asked NITs to be at the forefront of bridging the digital divide, income asymmetries and rural-urban differentiation in the country, especially, in view of the 'Make in India' and the 'Digital India' initiatives unveiled by the Government.

The President noted that Directors of the NITs must provide bold, innovative and inspiring leadership.

"Every NIT must institutionalize quality assurance and sustenance measures in all academic and administrative processes. The key areas of focus have to be engagement of quality faculty, innovation and research, excellence in teaching, industry linkages and social responsibility. NITs must aim to attract the best engineering talent in the country and transform them into outstanding engineers, researchers, scientists and teachers," he said.

The President asked NITs to also continue to engage with alumni so as to enable their full contribution to the growth, vibrancy and dynamism of their alma maters.

Pointing out that most of central institutions in the country are facing acute shortage of faculty at all levels.

The President said in his recent visit to Norway and Finland, he had called upon the scientists, researchers and academics amongst Indian diaspora to become a part of Indian campuses, either on a full time or a part time basis, as regular, visiting or adjunct faculty. He expected the Ministry of HRD, in consultation with higher educational institutions, to create an enabling environment for such movements to take place.

This is the second Conference of Directors of NITs during the present Presidency and is part of the regular, focused interaction the [President](#) has been having with Central Universities, IITs and IISERs in his capacity as visitor to these institutions. ([ANI](#))

NITs should be at forefront of bridging digital divide: Prez

http://www.business-standard.com/article/pti-stories/nits-should-be-at-forefront-of-bridging-digital-divide-prez-114102900831_1.html

President [Pranab Mukherjee](#) today exhorted NITs to be at the forefront of bridging the digital divide in the country especially in view of 'Make in India' and 'Digital India' initiatives launched by the government.

Inaugurating a two-day conference of Directors of National Institutes of Technology here, Mukherjee also asked the state-run engineering colleges to adopt at least one village each on the lines of 'Saansad Adarsh Gram Yojna'.

"NITs should also be at the forefront of bridging the digital divide, income asymmetries and rural-urban differentiation in the country especially in view of the 'Make in India' and the 'Digital India' initiatives unveiled by the government," he said.

Asking NITs to deepen their involvement with society by creating model villages worthy of replication across the country, he said, "They must source, if required, experts from other Central institutions to provide solutions to the wide mosaic of issues that such a transformation to model villages will entail."

NITs can and need to be the connecting force between rural innovations, local employment and world class manufacturing, Mukherjee said, adding "Their work must find resonance with the needs and aspirations of our people."

This was the second conference of Directors of NITs during the present Presidency and is part of the regular and focused interaction the President is having with Central Universities, IITs and IISERs in his capacity as Visitor to these institutions.

"Directors of the NITs must provide bold, innovative and inspiring leadership. Every NIT must institutionalise quality assurance and sustenance measures in all academic and administrative processes. The key areas of focus have to be engagement of quality faculty, innovation and research, excellence in teaching, industry linkages and social responsibility.

"NITs must aim to attract the best engineering talent in the country and transform them into outstanding engineers, researchers, scientists and teachers," he said.

Govt to launch Unnat Bharat Abhiyan

NAVEED IQBAL

NEW DELHI, OCTOBER 30

WITH a view to uplift rural India, the government is set to launch a new programme — the Unnat Bharat Abhiyan. The programme is being launched in collaboration with the Indian Institutes of Technology (IIT) and the National Institutes of Technology (NITs) across the country.

Although the programme is an initiative of the Ministry of Human Resource Development, it will be coordinated and steered by IIT Delhi. According to IIT Delhi Director R K Shevgaonkar, the programme will involve engaging with communities around each institute and for their upliftment. "Each

IIT will identify 10 villages in its neighbourhood and work out technologies to solve the most pressing issues of the region," Shevgaonkar said.

He also said that different teams from these institutes will visit the villages, identify problems and then aim to find financially-viable schemes. Once the solution is identified, "We will then involve the industry to scale it up."

The programme, with the help of IITs, NITs and other "leading technical institutions" will prepare a roadmap for holistic rural development. Along with the HRD ministry and the institutes, some other ministries such as rural development and NGOs working in villages are also likely to be involved in the pro-

gramme. Some of the problems that the institutes could be looking at are, supply of potable water, sanitation, energy and low cost housing.

The main idea for launching the programme is to provide definitive research that can be aligned with national development. A date for the launch is yet to be finalised but the institute has begun preparations and IIT Delhi has already begun identifying villages in its vicinity.

However, even as the modalities have been worked out, what remains unclear is source of funding for the programme. "It is still not clear where the funding will come from but, it should come from the government," Shevgaonkar noted.

Supersonic laser-propelled jets get a step closer

New Tech To Reduce Fuel Burden Of Aircraft As Laser Beam Will Provide Thrust

Soon, driverless cars that are affordable

Moscow: Scientists and science fiction writers alike have dreamt of aircraft that are propelled by beams of light and not fuel.

Now, a new method for improving the thrust-generated by laser-propulsion systems may bring them one step closer to practical use, scientists say. The method, developed by physicists Yuri Reznukov of the Institute of Optoelectronic Instrument Engineering, Russia and Alexander Schmidt of the Ioffe Physical Technical Institute in Saint Petersburg, Russia has been described in The Optical Society's (OSA) journal Applied Optics.

Currently, the maximum speed of a spacecraft is limited by the amount of fuel that it can carry. Achieving higher speeds



© George Hall/Corbis

LIGHT AND FLY

means that more fuel must be burned — fuel that has to be carried by the craft, researchers said. These burdensome loads

can be reduced, however, if a laser — located at a remote location and not on the spacecraft — were used to provide additional

propulsive force. A number of systems have been proposed that can produce such laser propulsion. One of the most promising systems involves a process called laser ablation, in which a pulsed laser beam strikes a surface, heats it up, and burns off material to create a plasma plume — a column of charged particles that flow off the surface.

The outflowing of plasma plume generates additional thrust to propel the craft.

Reznukov and Schmidt describe a new system that integrates a laser-ablation propulsion system with the gas blasting nozzles of a spacecraft.

Combining the two systems, researchers found, can increase the speed of the gas flow out of

the system to supersonic speeds while reducing the amount of burned fuel.

The researchers show that the effectiveness of current laser-propulsion techniques is limited by instability of supersonic gases as they flow through the gas nozzle, as well as production of shock waves that “choke” the nozzle. But those effects can be reduced with the help of a laser-ablation jet with supersonic gas flow through the nozzle, they found, significantly improves the overall thrust. “These techniques can be used not only for launching small satellites but also for additional acceleration of supersonic aircrafts to achieve Mach 10 and more,” Reznukov said. PT

Driverless cars could be within the price range of an average person in just 10 years, Australian researchers claim. This will be made possible by a new 'eyes and ears' technology developed by researchers from Curtin University in Perth. The technology comprises a dozen different sensors installed in an average car, paired with an algorithm that processes the large amount of data received. This creates meaningful information which tells the car the nature and location of obstacles, researchers said. Associate Professor Dr Ba Tuong Vo said this autonomous car would be commercially viable because it does not need to be connected to internet and can be produced at a low cost. PT

Indian Students Turn Entrepreneurs in S'pore

Besides government cash payouts and tax benefits, rules and regulations make it easier for startups and VC firms to register companies in that country

Anumeha.Chaturvedi@timesgroup.com

New Delhi: Prukalpa Sankar had the usual career plans of finishing her engineering and following it up with an MBA. A chemical and bio-molecular engineering student at Nanyang Technological University (NTU) in Singapore, she even interned with the right mix of recruiters – Goldman Sachs and ExxonMobil. But instead of landing her first job, she turned an entrepreneur.

Sankar credits the culture at NTU for turning her into a businesswoman. Having done a minor in entrepreneurship in her third year, she conceptualised and spearheaded Singapore Start-up challenge, an initiative funded by NTU that linked 200 startups to students looking for opportunities across Singapore. In her fourth year, she launched technology data company Social Cops, which aims to power decision-making in the social space through data sourced from on-the-ground sources in India.

Social Cops raised \$320,000 in seed funding from VC firm 500 Startups, Google MD Rajan Anandan and Frost & Sullivan Asia-Pacific MD Manoj Menon this July.

Buoyed by Singapore government's support including cash payouts and tax waivers, and assistance from universities, Indians are giving up corporate jobs for businesses in the South-east Asian country. Their business ideas and plans include addressing both global and regional problems back home.

National University of Singapore (NUS) alumnus Abhinav Krishna launched online portal OurHealthMate with Akash Kumar, an assistant professor at NUS.

It addresses a specific problem faced by Indians moving out of the country, he said, as the firm ties up with doctors in India to provide medical aid and support to family members of overseas Indians, and helps them get status checks through feedback reports on treatments and diagnosis. Through 10,000 registered doctors and an online payment gateway, overseas Indians can book check-ups and consultations for family members back home.

OurHealthMate was initially assisted by NUS Enterprise, a division of NUS which aims at providing experiential entrepreneurial education and entrepreneurship support through industry partnerships.

Block 71 in Singapore's Ayah Rajah Crescent has been revamped into an entrepreneurial hub by NUS Enterprise, corporate venture company SingTel Innov8 and Management Development Agency (MDA) Singapore. A cluster for light man-



Entrepreneurial Ecosystem

BUOYED BY GOVT SUPPORT

including cash payouts, tax waivers, and aid from universities, Indians are giving up corporate jobs for businesses in Singapore

IDEAS OF STARTUPS AIMED AT

addressing both global and domestic issues back home

GRANTS FROM THE GOVT FOR

startups to develop products, research/test bed ideas and commercialise products can range from \$50,000 to \$500,000

ufacturing industries back in the 1970s, Block 71 was up for demolition when it was converted into a tightly knit startup community. It offers subsidised rentals for accommodation and other facilities to early stage startups and houses 200 startups and 30 incubators and investors within walking distance of each other.

"We are developing entrepreneurs as we think entrepreneurs are not merely born, but can be created and nurtured," said Lily Chan, CEO of NUS Enterprise. NUS also runs NUS Overseas College in the United States, China, India and Israel, which enables NUS students to work with startups in these countries. "Students coming to India can work with social startups for three to six months on locations outside Bangalore, Jaipur and Mumbai. The idea behind the overseas college is to get students excited about working in small companies."

Naman Shah, an economics and business management student who graduated from NUS this year, is the **market lead** (Asia Pacific) for US-based startup BizEquity. An online business valuation

portal for small business owners, BizEquity raised \$5.1 million this month and Shah is setting up its operations in Singapore. He said his stint with the startup in Philadelphia through NUS Overseas College really helped him learn the ropes, adding, "In general, the culture here is not one of risk-taking. Students would still like to work in MNCs, but that's gradually changing."

Subject to certain conditions, the Singapore government provides about 60% cash payouts for investments made in innovation and productivity improvements in startups under its Productivity and Innovation Credit (PIC) Scheme. Businesses can also avail up to 400% tax deductions on up to \$400,000 of expenditure per year, a move targeted at some of the more mature startups.

Grants from the government for startups to develop products, research/test bed ideas and commercialise products can range from \$50,000 to \$500,000, depending on the stage of the startup and the eligibility criteria. Under the Technology Incubation Scheme, the National Research Foundation Singapore could co-invest up to 85% of investment (up to \$500,000 per company) in a Singapore-based startup, on recommendation from technology incubators, which include firms like Red Dot Ventures, Small World Group and Silicon Straits.

Indian alumni from INSEAD, the French business school which has a campus in Singapore, are also running successful ventures. RedMart, one of the more popular startups in Singapore, is an online grocery venture founded by INSEAD alumnus Vikram Rupani. It raised \$23 million in a series B round this July and investors include Eduardo Saverin, co-Founder of Facebook, and Toivo Anus, co-founder of Skype.

Sanjna Parasrampur, former Asia-Pacific regional head for HDFC, launched consumer analytics firm NEW-CLEUS after graduating from INSEAD last year.

"The next frontier for Singapore is in analytics and startups in analytics tend to get noticed a lot more," said Parasrampur, who was approached and incubated by NUS Enterprise. Parasrampur cites the example of online retailer Flipkart, which is registered in Singapore, and says government cash payouts and tax benefits aside, the rules and regulations make it easier for startups and VC firms to register companies in the country. "Given the current landscape in India, registering here makes more sense. Corporate tax rates in India could be anywhere around 33% while the maximum rate here would be about 17%."

RESEARCH, INNOVATION AS GROWTH VEHICLES

Education is a paradigm that helps in acquiring knowledge. Research is the heart and innovation the soul. Together, the growth engine would pick up speed and in the absence of any of these, it would sputter and backfire



S S MANTHA

Research is philosophy and needs to be practiced like we practice religion. A knowledge gathering individual would look to putting together the nuts and bolts, the data, metadata and information together and add to the body of knowledge researching and innovating as he goes along. Metadata helps in gaining the hindsight, innovation the insight and education the far sight. Research provides the vehicle to do this.

How do we explain complex concepts that are beyond the best brains? We do this sometimes through statistical, empirical, and even experimental or most of the times through standard dictionary phrases. A better way I believe could be anecdotal.

The word innovation derives from the Latin word *innovatus*, which is the noun form of *innovare* 'to renew or change'. We all know that any change is difficult and painful and hence innovation too needs a new thought process that constantly challenges the established norms.

Research and innovation, a vast subject, difficult to analyse within the realm of all disciplines is best to steer within the scope of IT as a discipline and hence information technology is my chariot to demystify Research and subsequently Innovation.

An interesting analogy that comes to mind is that of Abhimanyu: the warrior prince in mahabharata who was entrusted with the task of penetrating a Chakravyuh (certain formidable formation) of the enemy. His advantage was that he had learnt this very critical aspect of warfare when still in his mother's womb through his warrior father who had narrated it to his mother. However, the paradox of his prowess was to be his ignorance of how to exit the same having successfully vanquished the enemy.

That analogy is pertinent to India today. We seem to have arrived riding the wave of IT services without any clue as to the development of IT itself. It is the same way we missed

the industrial revolution. We missed the woods for the trees and today find ourselves stuck between what could have been and what is in recent times.

Even as governance of the country is challenged, the skill development and education in IT remains firmly hinged to hardware imports and hence the operating systems imports, where no more than 10-12 million PCs arrive in the country annually, though the country should have made giant strides in creating its own hardware brand and could have been a world leader.

We need to innovate with IT as the backbone of governance especially for a country the size of India that has nearly 18 per cent of the world's population and occupies only 2.4 per cent of the world's geography.

While we engineered the software DNA of the country, it is an apathy that we couldn't do much with the hardware, given our brain power. IITs continue to catapult the Indian knowledge and sow it on foreign lands but that again is limited to conjoining the dots there, while the return import of that knowledge however is costing us precious revenue outgoes even as corporation upon corporation in the US is thriving on the nutrition it derives from the patent laws and IP rights prevalent there and limitedness of the same here. The hardware vendors to India whether from Japan, US, China or other countries indeed hold the lock, we may have the key in the form of our software prowess but keys don't sell without locks in India but locks sell everywhere.

Just as Mahabharata, the Panchatantra and Chanakyastra have been universally available for free, we seem to have lost the plot somewhere there when it comes to developing and encouraging enterprise.

The rate of growth today determines the almanac of an Indian enterprise; more so; the PSUs. This requires a revisit. Profit is indeed a bad word in India and in the Indian psyche, however we again miss the woods for the trees if we have to look at profit in seclusion and not in conjunction with the right business practices with laws that protect the development and encourage the idea of its propagation through adequate and appropriate controls. Profit is definitely a bad word unless it is supported by the right means



WORKSHOP OF OPTIMISM: ISRO facility at Hassan, Karnataka

and is harvested as a process of great cultivation practices; both of which are fuzzy in India. We seem to have duplicity and a generous sameness of business models that continue to war a common turf.

The copy-paste jobs that the students in IT and technical colleges undertake when developing their projects as part of their curriculum don't help either. Here is a solution; it is at best a case in point. With the advent of cloud, what if the ministry of micro, small and medium enterprise could share its data with AICTE and AICTE were to encourage colleges to occupy and script their enterprise applications on a piece of cloud that they could acquire to be used as their lab.

There is a good chance that a small nut and bolt manufacturer will turn his attention to where these nuts and bolts go and who knows he may actually end up starting a computer manufacturing unit. Yes! it says that, all that we have around ourselves today was once considered impossible; so be it, thus it shall be!!

If industrial growth is indeed vital for the Indian economy, it is a matter of time that the MSMEs will get connected to the Government, their buyers and bankers and a global marketplace and set in motion a sustainable juggernaut that would thrive on research and innovation.

I realise that the opportunity and the responsibility that these observations of mine impose on me is immense and while I am at liberty to expound my views on Research and Innovation involving boiling of the oceans and world hunger and poverty, at my best, however, I can only offer a perspective.

I share the above as a small blueprint of an idea that has potential of

enabling us to crank our own engines rather than remain subservient to a limited vision and as consequence to economies of the west. We have an opportunity to learn from them!

So in a nutshell:

1. Shall we start a debate on the patent and IP laws and developing the right tools and implements to develop, propagate and protect our GDP growth. Our hardware shall grow out of that reason.

2. Study profits as both an end and a means to development and progress, given the right environment, tools and implements. There is need to revisit our rate of growth that at best rides a turnpike of inflation to at best reverse itself.

3. Let each college buy a piece of the cloud that propagates millions of nurseries with a potential to raise the MSMEs and spur innovation to deliver quicker, better and more competitive products from the MSMEs!

Let me make a different pitch: Object oriented languages that form the backbone of modern computing, came out of a great innovation. Dennis Ritchie the developer of UNIX, who helped shape the digital era and a great innovator by any standard, said that though there were technical and semi-technical aspects of using C family of languages, they turned out to be well-placed both for describing things at a high enough level so that portability across hardware was feasible, but simple enough in its requirements to make it cheap to implement. The entire modern computing today is based on this one innovation.

We need innovators and innovations of that standard. Innovation comes out of empowering individuals to out beat and outperform mediocrity. We need radicals and

mavericks to promote innovation and systems to identify such individuals and protect them from the mediocrity and banality around.

We need to create ecosystems that enable environments to flourish in research and innovation in our institutions. We need to define dynamic structures that bring out the best in our youth. We are far too much and too often couched in false protection mechanisms and falsely protected mechanisms that we have lost the ability to take risks. Failure and even a perception of failure haunt us. We need to empower our school going children, youth, where demographic dividends are firmly in their favour for the next 25 years, to take risks, and also appropriately protect them against possible failures. Innovation would be born out of this.

Innovation and Research for Product development and process improvement as a means to encourage quality, is an important activity and should be promoted by collaborations with large Industries, and engagement with MSMEs to improve the global brand image of the country. This is possible with design innovation centres in our institutions for product development and process improvements. In an economy which is a predominantly based on imports product development becomes very critical. Newer hob markets emerge from such initiatives.

We need to break the shackles of regulatory systems, break free, ideate and allow free enterprise to promote research and Innovation. New financial models need to be created for public and private funds, or even create bonds with third party collaterals or create outcome based loans for funding research and innovation.

We also need to move out from purely transactional approach to problem solving and create robust processes driven systems. This will help in defining processes and hence create an environment to promote free enterprise. Redefining even the IT and patent laws is necessary to protect the ideas, processes and systems so that cross reference driven pointers do not rob individuals of their intellectual property and a means of livelihood based on their ideas and creativity.

The author is Chairman, All India Council for Technical Education

ISRO to test unmanned crew module in Dec

SHUBHADEEP CHOUDHURY
TRIBUNE NEWS SERVICE

BANGALORE, OCTOBER 30

The Indian Space Research Organisation (ISRO) will test an "unmanned crew module" (for a future human space flight programme) in the "first half of December".

Talking to reporters on the sidelines of an engineering conclave here today, ISRO Chairman K Radhakrishnan said the "crew module", weighing around 3.6 tonnes and fit for housing two space explorers, will be carried aboard a GSLV (Mark III) experimental rocket.

Radhakrishnan said the crew module would be tested for "re-entry" into the atmosphere. While an actual human space flight programme is likely to target an orbit around the earth, the experimental flight will put the satellite only about 100 km or 120 km above earth.

According to the ISRO chairman, it is at that height only a spacecraft encounters problem (like catching fire) during its return from space. Besides addressing the problem of the craft's re-entry into the atmosphere, the ISRO is also working on fitting the craft with a parachute.

The parachute will open up before landing by the craft reducing its velocity considerably to pave the way for its "soft landing". The landing will take place somewhere near the Andaman seas from where it will be retrieved.

Future human space programme

- The "crew module", weighing around 3.6 tonnes and fit for housing two space explorers, will be carried aboard a GSLV (Mark III) experimental rocket
- The crew module would be tested for "re-entry" into the atmosphere. The experimental flight will put the satellite about 120 km above the earth
- According to ISRO, it is at that height only a spacecraft encounters problem (like catching fire) during its return from space

The GSLV rocket carrying the "crew module" will have a passive cryogenic stage. "Instead of liquid hydrogen and liquid oxygen, it will have liquid nitrogen and gaseous nitrogen", Radhakrishnan said. The cryogenic stage too is being tested for atmospheric challenges.

Describing the December launch as a very important one, Radhakrishnan said the rocket was now being integrated with the payload (crew module) at the ISRO launch-pad at Sriharikota near Chennai. The cryogenic stage at which the ISRO is working on now has a simpler mechanism than the one used by the agency for its last and maiden successful GSLV launch with an indigenous cryogenic engine, Radhakrishnan said.

Rockets Go Boom. SURPRISED?

▣ Nobody should forget that space exploration entails risks that can never be entirely eliminated, and America's future in space is largely dependent upon how willing it is to accept that difficult fact, writes Adam Minter

There's no risk-free way to launch 5,000 pounds of food, science experiments and equipment to the International Space Station. Some ways, it turns out, are far more dangerous than others. For example, before 2011, the space shuttle was the primary way the US delivered such cargo, even though two of the 135 missions ended up in catastrophic failures — a rate that far exceeds what's acceptable for Earth-bound logistics businesses.

After the shuttle was retired, reliable Russian Progress modules carried such cargo. But even the Ford truck of the orbital set has its off days: In 2011, a Progress mission to the space station failed when the third stage of a rocket didn't ignite, stranding the cargo in low Earth orbit. Remarkably, it was the first failure of a Progress mission since its origins in 1978 — but it was still a failure, and an expensive one at that.

Which brings us to Tuesday night's spectacular failure of Orbital Science's Antares rocket over Virginia. Orbital Science is not the National Aeronautics and Space Administration or the Russian government. It is one of two private companies (the other being Elon Musk's SpaceX) to have a contract with NASA to provide commercial cargo services to the International Space Station. NASA needed such alternatives to the



ANIRBAN BORA

retired shuttle and Russian launch services, and was keen to spur the development of a US commercial space services sector. Thus, NASA funded and supervised the launch providers' development, ensuring that technical and safety measures met the agency's standards. Yet, in the interest of speeding up the process and saving money, NASA allowed the commercial providers to develop their programmes without having to fulfill the extreme paperwork requirements that typically engulf NASA programmes (but which, traditionalists argue, contribute to a culture of safety).

Will NASA's commercial launch providers sacrifice profit for safety? Fireballs over Virginia suggest that they have. Yet, according to NASA's internal history of the Commercial Orbital Transportation Program published in February, they never had the chance. SpaceX and Orbital Sciences had the right to ignore the NASA advisers on all matters

"except those related to safety." In those cases, they — including the famously mercurial, independent-minded Musk — had to take orders. That's no guarantee that corners weren't cut, but it does suggest that NASA's culture of safety wasn't completely absent during the Antares' development. For now, speculation over the cause of the accident centres on Orbital Science's use of

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decades-old Russian engines that — with NASA supervision — it bought and rescued from corrosion and neglect. Not everyone was impressed. In 2012, Musk referred to the Antares as the "punch line to a joke" and noted that these engines "were literally made in the '60s and, like, packed away in Siberia somewhere." Even NASA, in its internal history of the programme, referred to the engines as "cantankerous." And in May, an engine — slated for launch in 2015 — was destroyed during a test in Colorado. But it's also widely accepted that newer rockets fail more often than older, well-tested ones, especially if they're involved in complex missions. Indeed, SpaceX and its Falcon 9 rocket experienced a catastrophic failure in a test in August.

Whatever the cause of the Antares failure, it's clear that NASA and Orbital Services missed a flaw in the new rocket, despite decades of experience on both sides, and extensive, careful testing of the Russian engines. And that was to be expected. "NASA knows all too well there will be failures and setbacks ahead," Alan Lindenmoyer, manager of the Commercial Orbital Transportation Program, explained in the NASA history. "But we also know that through the trusted partnerships we have forged with our industry colleagues, problems will be solved and a new era in commercial space will begin."

Of course, that doesn't make an expensive, catastrophic rocket failure OK. The cause of the Antares rocket explosion needs to be found, and a solution created so that it won't happen again. If responsibility can be assigned, it should be. But at the same time, nobody should forget that space exploration entails risks that can never be entirely eliminated, and America's future in space is largely dependent upon how willing it is to accept that difficult fact. Bloomberg